

MOBILE RADIANT ENERGY STERILIZER

Abstract of the Disclosure

10 A portable, radiation-producing apparatus is provided that can produce highly energetic electron beam radiation and X-rays from a low voltage power source., e.g., a battery. The radiation-producing apparatus is comprised of a radiation generating device, a pulsed high voltage generator and a control system. The pulsed high
15 voltage generator is comprised of a power source and a Tesla resonant transformer. The Tesla resonant transformer has at least one first capacitor, a primary coil, a secondary coil and at least one second capacitor. The at least one second capacitor is disposed axially
20 within the secondary coil. The pulsed high voltage generator is connected to the radiation generating device for providing electrical energy to the radiation generating device. The control system is connected to the pulsed high voltage generator for selectively controlling
25 the transfer of energy from the pulsed high voltage generator to the radiation generating device. The radiation-producing apparatus generates pulses of electrons and X-rays. Each pulse has a time duration of about 100 nanoseconds or less. The electrons and X-rays
30 produced by the radiation-producing apparatus can be used to deactivate microbial contamination or irradiate various materials.